

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

GEMALTO S.A.,	§	
	§	
Plaintiff,	§	
v.	§	Civil Action No. 6:10-CV-561-LED
	§	
HTC CORPORATION, HTC AMERICA,	§	JURY TRIAL DEMANDED
INC., EXEDEA, INC., SAMSUNG	§	
ELECTRONICS CO., LTD., SAMSUNG	§	
TELECOMMUNICATIONS AMERICA	§	
LLC, MOTOROLA MOBILITY, INC., and	§	
GOOGLE INC.,	§	
	§	
Defendants.	§	

PLAINTIFF GEMALTO S.A.'S REPLY TO DEFENDANTS' RESPONSIVE

CLAIM CONSTRUCTION BRIEF (D.I. 180)

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NOTE ON CITATIONS

- References to *Plaintiff's Opening Claim Construction Brief* (February 24, 2012) are indicated by the abbreviation "Br.," followed by the page number being cited. "Br. 5" therefore refers to page 5 of Plaintiff's opening brief.
- References to *Defendants' Responsive Claim Construction Brief* (April 2, 2012) are indicated by the abbreviation "D.Br.," followed by the page number being cited. "D.Br. 5" therefore refers to page 5 of Defendants' responsive brief.
- References to the patents-in-suit are indicated by column and line number, or by claim number. Unless stated otherwise, all references are to the specification of the '317 patent. A reference to "3:15-17" therefore means column 3, line 15 through line 17 of the U.S. Patent No. 6,308,317.
- Excerpts from Timothy Wilkinson and Scott Guthery Depositions are attached as Exhibits CC and DD, respectively. Depositions are referred to with the name of the deponent only. A reference to "Guthery, 4:12-25" therefore means pages 4, lines 12-15 of the Guthery deposition.
- Other exhibits are attached as Exhibits AA and BB.

INDEX OF EXHIBITS

Ex. AA	U.S. Patent No. 5,923,884
Ex. BB	Jan Axelson, "The Microcontroller Idea Book," Lakeview Research, Madison, WI, 1994, 1997, page 24.
Ex. CC	Excerpts from Timothy Wilkinson Deposition of March 21, 2012
Ex. DD	Excerpts from Scott Guthery Deposition of March 28, 2012

I. HARDWARE RELATED TERMS

A. Apparatus Claims Include Different Forms of Microcontrollers, Integrated Circuit Cards and Programmable Devices

Patentees purposefully disclosed and claimed different physical embodiments of their invention including microcontrollers, integrated circuit cards and programmable devices. Defendants incorrectly assert that the invention is to “run on the limited resources” of these three classes of hardware. (D. Br., 3) In fact, some of the microcontrollers and programmable device claims expressly recite “resource constraint” while others do not. *Compare* ‘317, cl. 58, with ‘317, cl. 65. None of the “integrated circuit card” claims include this limitation. These differences in claim language should be respected. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*en banc*) (“Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.”). Defendants’ construction, however, renders the term “resource constraint” superfluous in those claims. *See Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”). Defendants’ attempt to group these claims together, despite these differences in language, should be rejected.

B. Microcontrollers

1. Patentee Never “Traversed Prior Art” by Distinguishing Microprocessors from Microcontrollers

Defendants’ negative— “not a microprocessor” — limitation should be rejected because Gemalto did not distinguish the prior art on the basis that the claims recite a microcontroller while the prior art used a microprocessor. Defendants incorrectly assert that “to avoid prior art,” Patentees “again and again” distinguished microcontroller and microprocessors during prosecution. (D. Br., 4.) This is demonstrably wrong. The prior art in question, entitled “System and Method for Loading Applications Onto a *SmartCard*.” (Ex. AA, U.S. Patent No.

5,923,884 (emphasis added)), relates to smartcards “containing a semiconductor chip, such as a microprocessor” or “micro-controller,” and not conventional desktop computers containing microprocessors. (*Id.* at 1:9–13, 53–56). Gemalto did not and could not distinguish the Peyret ‘884 patent on the basis of a microcontroller versus a microprocessor. Instead, it was distinguished because it did disclose ***Java or a high level programming language***. (D. Br., Ex. D at GEM2983 (“Peyret is completely silent on how to enable a program written in a high level language to operate on an integrated circuit card.”), 84 (“Peyret’s disclosure, which neither mentions nor suggests high level languages nor how to put such language interpreters on a smart card, would be of no help to the ordinarily skilled person.”)) Defendants’ disclaimer argument must therefore be rejected.

Defendants further argue that the preambles of claim 7 of the ‘485 patent and claim 3 of the ‘727 patent should be construed as limitations of those claims because of such statements made during prosecution to distinguish the prior art. (D. Br., 11, 16) However, the relevant prosecution histories show that patentees distinguished their invention on the basis of the *conversion* process. For example:

- “Appellants invite the Board to consider in particular ***one distinguishing feature, namely, the converter*** that converts the compiled form of an application into a form suitable for interpretation by a specialized interpreter that interprets derivative applications in the converted form Appellants introduced the additional step of converting the compiled form from a Java compiler into a form suitable for interpretation on a specialized interpreter. ***Peyret does not teach or suggest this additional step.***” (D. Br., Ex. E, ‘485 Prosecution History, Appeal Br. at 4-5 (emphasis added).)
- “To deal with the resource constraints of smart cards, the solution included creating a reduced class file specification (the card class file), a reduced interpreter that would interpret programs in the reduced class file specification, and a special program to convert between the compiled output of the high.level language development environment and the reduced class file specification, ***the converter, the at least one additional tool or step added by the inventors.*** (D. Br., Ex. G, ‘317 Reexamination History, 2/21/2008 Reply and Amendment. at 39 (emphasis added).)

The discussion of “microprocessors” in the background of the invention section does not rise to a “clear and unmistakable surrender” of subject matter required to impose this negative limitation. *See Thorner v. Sony Computer Entm’t Am.*, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012). Instead, the patent uses qualified language such as “typical” (2:7-10) and “generally” (2:11-14). In addition, that discussion was limited to “microcontrollers” and could not serve as a basis to limit the “integrated circuit card” and “programmable device” claims. *See Seven Networks Inc. v. Visto Corp.*, No. 2:05-CV-365, 2006 U.S. Dist. LEXIS 93870 at *14-15 (E.D. Tex. Dec. 29, 2006).

2. Microcontrollers May Use External Memory

Defendants quickly retreated from their original construction of microcontroller that did not permit any external circuitry after Gemalto showed that such a construction is inconsistent with the express teaching of the specification. Now, rather than asserting that a microcontroller does not require external resources to function properly, they state that it does not require external memory to function properly. Defendants’ fallback position fares no better. The evidence of record is replete with examples of microcontrollers using external resources including memory. (*See, e.g.*, Ex. BB, J. Axelson, “The Microcontroller Idea Book,” p. 24 (showing a “microcontroller” connected to a “static RAM”).) Once again, Defendants can not point to a single statement in the specification or file history that supports its imposition of a negative limitation (i.e., “does not require external memory to function properly”), and should therefore be rejected. *See Thorner*, 669 F.3d at 1366-67. Defendants’ revised construction also reduces rather than provides clarity with the notion of “function[ing] properly,” as compared with Gemalto’s straightforward construction.

3. Defendants' "Not a Microprocessor" limitation is belied by the intrinsic and extrinsic evidence

The specification states that "[i]ntegrated circuit cards are known in the art as chips cards, *microprocessor cards*, or smartcards." (Br., 15 (emphasis added)) In doing so, the inventors made clear that the claimed invention could work with microprocessors-based cards as well as microcontroller-based cards.

Defendants' reliance on an inventor's testimony to support this negative limitation is equally misplaced. First, inventor testimony on the meaning of claims is essentially irrelevant. *See, e.g., E-Pass Techs., Inc. v. 3COM Corp.*, 343 F.3d 1364, 1370 n.5 (Fed. Cir.) ("this court has often repeated that inventor testimony is of little probative value for purposes of claim construction"). Second, Defendants rely on selective quotes to support their position. (D. Br., 9) When considered in its entirety, Dr. Wilkinson made clear that the term microcontroller subsumes the term microprocessor:

Q: And does your iPhone have a microprocessor?

A: Not as a -- not as a separate entity, it doesn't, but it certainly has a core in there, yes.

Q: What do you mean 'not as a separate entity'?

A: So back in 1995, you know, a -- a microprocessor would be a -- an independent chip. My iPhone has a microprocessor in it. It's on the -- it's on the dye of the -- inside the phone, but it's certainly not an independent chip. It's part of something else, *which is how I would think of it as a microcontroller*, because it's that -- the dye contains that plus a bunch of other stuff."

(Wilkinson, 24:18-25:4.) Rather than undermine Gemalto's construction, Dr. Wilkinson's testimony actually supports it—a microcontroller is a device that includes a certain CPU and additional circuitry designed for a particular embedded application.

C. Integrated Circuit Card Was Drafted to Cover "Bases"

Defendants' construction of "integrated circuit card" only gives lip service to the broad description of that term in the specification. Defendants concede that a smartcard is a type of

integrated circuit card. (D. Br., 12), but then try and sidestep the significance of the following description of integrated circuit cards:

In some embodiments, the microcontroller, memory and communicator are embedded in a plastic card that has substantially the same dimensions as a typical credit card. In other embodiments, the microcontroller, memory and communicator are mounted within bases other than a plastic card, such as jewelry (e.g., watches, rings or bracelets), automotive equipment, telecommunication equipment (e.g., subscriber identity module (SIM) cards), security devices (e.g., cryptographic modules) and appliances.

(7:56-65.) Defendants claim that the second sentence does not refer to integrated circuit card embodiments but represents other embodiments. (D. Br., 12.) However, the second sentence refers to SIM cards, which are a type of smart card. (Wilkinson, 28:14-22 (“Q: What did you understand the Smartcard to be in 1995? A: Yeah, they probably called them chip cards or something, I guess. I’m not sure I -- I fully understood what a Smartcard was in 1995. I mean, it was a -- I mean, as far as I knew, it was -- you know, looked like a credit card. There was a chip on it. I had seen one because I had a GSM phone.”)) Thus, the second sentence also relates to integrated circuit cards.

D. Programmable Device

Defendants’ brief ignores black letter law that a genus (e.g., programmable device) of the disclosed species (e.g., microcontroller and integrated circuit card) in predictable arts such as mechanical or electrical elements should not be limited to the species. (Br., 16-17.) Gemalto’s innovative *conversion* techniques have broad application across a wide range of devices. (18:65-19:30.) As they are entitled to do, patentees claimed the broader genus relating to the hardware. Patentees’ intentional choice of words should be respected. *Phillips*, 415 F.3d at 1316–17.

Defendants’ also have not and can not carry the heavy burden of showing that Gemalto disclaimed a broad swath of subject matter. *Seven Networks*, 2006 U.S. Dist. LEXIS 93870, at *14-15. As discussed *supra*, the prosecution evinces no disclaimer. The discussion in the Background of the Invention relating to microcontrollers and microprocessors makes no mention

of the term “programmable device.” Accordingly, that discussion cannot be used as a basis to limit this term. *See, Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 908 (Fed. Cir. 2005)

II. SOFTWARE RELATED TERMS

A. High Level Programming Language

Defendants’ construction for high level programming language flies in the face of how the term is used in the claims and specification. Even though *every single claim* of the patents-in-suit is directed to a programming language that is first compiled into a compiled form and then converted into an interpretable form, Defendants suggest that a high level programming language can be compiled or interpreted. This can not be reconciled with the claim language, as illustrated in claim 1 of the ‘317 patent:

1. An integrated circuit card... comprising...
a memory storing:

an application derived from a program written in a *high level programming language* format wherein the application is derived from a program written in a high level programming language format *by first compiling the program* into a compiled form and then converting the compiled form into a converted form...

an *interpreter operable to interpret* such an application derived from a program written in a high level programming language format; and a processor coupled to the memory, the *processor configured to use the interpreter to interpret the application* for execution and to use the communicator to communicate with the terminal.

This language “operable to interpret such application” reveals that the “high level language” must be one that is both compiled *and* interpreted. This teaching of the specification is in accord. All of the high level languages that are described in the specification must be both compiled *and* interpreted. (*See, e.g.*, 18:47-64 “Regardless of the source of the class files, the above description applies to languages other than Java to generate codes to be interpreted.”)

Defendants’ proffer of two pieces of extrinsic evidence relating to Java Optimized Processors (“JOP”) to support their construction should be rejected. Both references post-date

the filing of the original application and are therefore irrelevant to establishing the meaning of this term at the time of filing date. *See, e.g., Smartphone Techs. LLC v. Research in Motion Corp.*, No. 6:10-CV-74, 2012 U.S. Dist. LEXIS 19242 at *12 (E.D. Tex. Feb. 13, 2012) (the relevant period for extrinsic evidence is the priority date of the application); *see also Medinol Ltd. v. Guidant Corp.*, 417 F. Supp. 2d 280, 301 (S.D.N.Y. 2006) (ignoring post-effective date extrinsic evidence). The notion of a JOP, which effectively involves compiling a language (Java) for a customized hardware runs counter to the novel conversion process of this invention and would therefore not be contemplated by a person of ordinary skill in the art. (1:49-54, 3:6-8.)

B. Compiling / Compiled Form

As discussed above, all the claims discuss *compiling and then interpreting* the high level programming language. Therefore the program is transformed (i.e., converted) into a form that is suitable for interpretation. In the context of Java and interpretable languages, this means class files containing byte codes but not object code.

Gemalto acknowledges that the traditional notion of a compiler was to transform high level programming languages into object code that can be directly executed by computer hardware. In the context of interpreted languages, however, compilers do not produce executable object code but rather byte codes. (Br., 6 n. 4) Hence, when inventors Guthery and Wilkinson were asked about what a compiler can do in the abstract they provided both alternatives. ((Wilkinson, 133:22-134:17), (Guthery, 104:5-105:9)) Even if their testimony was relevant to claim construction, it can not contradict the meaning of that term as used in the patent. *See, e.g., E-Pass Techs.*, 343 F.3d 1364, 1370 n.5 (inventor testimony irrelevant to claim construction).

Defendants also take statements Gemalto made in prosecution of a child application of the patents-in-suit, Application No. 12/907,949, out of context.¹ The statement did relate not to

¹ Despite Defendants' charge that they were surprised by this extrinsic evidence, the Court can readily see that it was disclosed in the Joint Claim Construction Statement (Dkt. 157, Ex. A at 3). Further, this statement was made close to

“conversion,” as Defendants contend, but referred to “conversion from a *compiled form*” as “conversion from an *interpretable compiled code*.” (Br., Ex. I, at 29-30.) Therefore, the compiled code is interpretable byte codes rather than directly executable object code. (Br., 6 n. 4)

During prosecution of the '485 Patent, Gemalto also quoted to the traditional notion of compilation. (Br., Ex. J, at 5) However this remark was made in the context of pointing out a logical fallacy made by the Examiner and not distinguishing prior art based on this definition. Patentees explained that (traditional) compilation produces “1”s and “0”s -- machine object code -- but not all machine code is made by the process of compilation. This remark in the prosecution history does not undermine Gemalto’s construction.

C. Byte Codes / Virtual Machine

Defendants’ misunderstanding of “byte code” and “virtual machine” are reason enough to have these terms construed. First, they claim that byte codes are “codes” in “byte” format and “[w]hether those instructions are executed by a real or virtual machine is not a property of the code themselves.” However, it is a property of the code whether it is designed for a specific hardware or for a hardware independent platform such as a virtual machine. Gemalto’s construction reflects that property. Second, as the name implies, “virtual machines” are virtual or software implementation. Defendants’ references to hardware-based JOPs are therefore inapposite as discussed *supra*.

D. Class File Format

Defendants again try to expand a “hypothetical computer called a Java Virtual Machine” to include hardware implementations not discussed or hinted at in the specification. In particular, they attempt to associate the “hypothetical computer” with something that was not

one year ago, long before this Markman process began and before Defendants assembled a mountain of alleged prior art in their Invalidity Contentions.

invented until after the patent was filed. In addition, Gemalto's construction for "application having a class file format" comes straight from the specification and fits in with claim 58 of the '317 Patent that Defendants cite.² (Br., 9)

E. Converting / Converted Form

Defendants' arguments are based on the false premise that Gemalto seeks to read unnecessary limitations into these terms. Not so. Gemalto's proposed constructions follow inextricably from the way the terms are used in the claims and the teaching disclosed in the specification. All the claims require that a compiled form or class file format first be generated and then converted. For reasons previously discussed, Gemalto asserts that both of these must contain byte codes. Gemalto also explained that byte codes, by design, are interpretable by a virtual machine. When read in the context of all the claims, it is clear that the "converting" must occur after the generation of byte codes (compilation) and is therefore a post-processing step of the byte codes from the compiled form into the converted form.

A genuine dispute exists as to the meaning of "converted form." This term appears in almost all claims and while Gemalto offers a construction, Defendants offer none. The term requires construction. *See 02 Micro Int'l Ltd. C. Beyond Innovation Tech. Co.*, 521 F. 3d 1351, 1360 (Fed. Cir 2008). Every single claim requires that the result of the conversion processing be interpretable, i.e. include byte codes that are interpretable by a virtual machine. Since the invention relates to conversion of byte codes such that they will work with a different virtual machine the converted form must be interpretable by a different virtual machine than the original byte codes.

² Any issue with an incongruent construction for claim 2 is irrelevant as Gemalto has chosen not to pursue this claim and Defendants have not even offered a construction for any of these terms.

F. Specific Byte Code / Generic Byte Codes Attributes

Defendants concede that their construction for this pair of terms is not technically accurate, in contrast to Gemalto's, but can only implore that the jury is not sophisticated enough to understand the concept of a "built-in" argument and a separate argument.

G. Attributes

Defendants seem to agree that attributes represent information in a class file format, yet they would limit it to the very specific predefined format of the preferred embodiment. Defendants offer no justification for doing so. An out of context statement from the inventor falls woefully short of the evidence necessary to limit the scope of this ordinary term. *See, e.g., E-Pass Techs.*, 343 F.3d at 1370 n.5; *see also Guthery* 109:1-17.

III.RESOURCE CONSTRAINTS AND MEANS PLUS FUNCTION TERMS³

³The "resource constraints" and "means plus function" terms will be addressed in Gemalto's Opposition to Defendants' Motion for Summary Judgment of Indefiniteness.

Dated: April 20, 2012

Respectfully submitted,

/s/ Sam Baxter

Sam Baxter
Texas State Bar No. 01938000
sbaxter@mckoolsmith.com
MCKOOL SMITH, P.C.
104 East Houston, Suite 300
Marshall, Texas 75670
Telephone: (903) 923-9000
Facsimile: (903) 923-9099

Robert A. Cote
rcote@mckoolsmith.com
John Petrsoric
jpetrsoric@mckoolsmith.com
Radu A. Lelutiu
rlulutiu@mckoolsmith.com
Shahar Harel
sharel@mckoolsmith.com
Allison Spiegel
aspiegel@mckoolsmith.com
MCKOOL SMITH, P.C.
One Bryant Park, 47th Floor
New York, New York 10036
Telephone: (212) 402-9400
Facsimile: (212) 402-9444

Peter J. Ayers
payers@mckoolsmith.com
Pierre Hubert
phubert@mckoolsmith.com
Laurie L. Fitzgerald
lfitzgerald@mckoolsmith.com
Geoffrey L. Smith
gsmith@mckoolsmith.com
Todd Bellaire
tbellaire@mckoolsmith.com
Christopher J. Mierzejewski
cmierzejewski@mckoolsmith.com
MCKOOL SMITH, P.C.
300 W. 6th St., Ste. 1700
Austin, Texas 78701
Telephone: (512) 692-8700
Facsimile: (512) 692-8744

**ATTORNEYS FOR PLAINTIFF
GEMALTO S.A.**

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who have consented to electronic services on this the 20th Day of April, 2012. Local Rule CV-5(a)(3)(A).

/s/ Shahar Harel

Shahar Harel